ABSTRACT OF THE DISCLOSURE

An error function S is defined by dividing the square of the difference between each of the characteristic quantities g_{iy} and corresponding the function f_y (v_i, P) by variance σ_{iy}^2 of observed values from a plurality of samples and summing the quotients for the plural number of extrinsic factor sets. It is possible to correct the effects of variation and bias of the observed values included in the error factor with division by the variance σ_{iy}^2 for each of the characteristic quantities even when there is a variation in size among the values of the error factors in the characteristic quantities. Further, it is verified whether the function f_y (v_s, P) reproduces the observed values by utilizing conformity of the value of the error function S to χ^2 distribution and when it is verified that the function f_y (v_s, P) reproduces the observed values, the parameter set P at that time is extracted as one that gives the minimum value of the error function S. Thus provided is a method of extracting physical model parameters which allows sufficient reduction in value of the error factor for each characteristic quantity even when there is a variation in size among the values of the error factors in the characteristic quantities in the error function, and a technique for a quick parameter extraction to obtain a true solution can be achieved.